



THE ROLE OF GOVERNMENT IN SUSTAINABLE DEVELOPMENT

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ABSTRACT

The level of awareness and performance in implementing environmental, economic and social based projects is increasingly debated in the construction industry. Not only in developed countries, but Malaysia which is considered an aggressive developing country with infrastructure development also faces this challenge. Sustainable construction or green construction that is gaining attention among construction industry players is a construction concept that promotes environmentally friendly, economic, and social development. By using mean analysis, the level of designer knowledge, awareness and application are identified. The result shown that, the level of designers to eco-friendly is at a low level. Thus, stakeholders such as the government need to play a more proactive role so that sustainable development can be practiced more effectively, especially in the application of eco-friendly concepts. In addition, the systematic process is also a key pillar in ensuring the smooth implementation of infrastructure construction either under the supervision of the government or the private sector. There are several construction procurement systems commonly used in construction projects, including conventional systems, design and construction, project management and also systems based on cooperative relations

KEYWORDS: *Sustainable development, environmentally friendly, government role, designer*

INTRODUCTION

The level of awareness and performance in implementing environmental, economic and social based projects is increasingly debated in the construction industry (Termeer, Dewulf & Biesbroek, 2017). Not only in developed countries, but Malaysia which is considered an aggressive developing country with infrastructure development also faces this challenge (Salet & de Vries, 2019; Hawkins, Krause, Feiock & Curley, 2018). Sustainable construction or green construction that is gaining attention among construction industry players is a construction concept that promotes environmentally friendly, economic, and social development (Hasif Rafidee, Mohd Nazaruddin & Mohd Nasrun, 2018; Huang, Lings, Beatson & Chou, 2018).

However, the implementation of this concept also faces challenges and requires strong support from various parties (Echebarria, Barrutia, Eletxigerra, Hartmann & Apaolaza, 2018). This is clear because sustainable construction requires certain practices in construction especially in terms of selection of materials that have been labeled green, environmentally friendly resources, construction methods as well as design (Patterson & Huitema, 2019). It is also important in ensuring that efforts to improve performance, reduce project load on the environment, reduce waste of resources and more environmentally friendly construction can be achieved holistically (Minkman, Letitre & van Buuren, 2019).



In addition, the systematic process is also a key pillar in ensuring the smooth implementation of infrastructure construction either under the supervision of the government or the private sector (Turcu, 2018). There are several construction procurement systems commonly used in construction projects, including conventional systems, design and construction, project management and also systems based on cooperative relations (Chuang & Liao, 2018). Therefore, this study tries to identify what role has been played by stakeholders in creating sustainable development with an environmentally friendly concept.

LITERATURE REVIEW

Sustainable development refer to development that meets current needs without neglecting the ability of future generations to meet their needs. The concept of Sustainable Development is based on three main pillars, namely economic, environmental and social. To ensure sustainable development projects, economic prospects alone are not enough and even the development must be environmentally friendly as well as meet social responsibilities and needs (M € obius & Althammer, 2020; Uittenbroek, Mees, Hegger & Driessen, 2019; Gustafsson, Hermelin & Smas, 2019; Mohd Nazarrudin et al, 2018).

In the chemical industry for example, the Institute of Chemical Engineers (IChemE) UK has introduced a guideline known as Sustainable Metrics to assess the sustainability of chemical plant operations. Similar guidelines have also been introduced by the American Institute of Chemical Engineers (AIChE) in collaboration with world-renowned companies such as Air Products, Akzo Nobel, Ashland, BASF, Celanese, Dow Chemical, DuPont, Eastman Chemical, LyondellBasell, and Praxair and Rohm and Haas. These guidelines were introduced to ensure the sustainability of chemical plant operations from economic, environmental and social aspects (Hasan, Evers, Zegwaard & Zwarteveen, 2019; United Nation, 2018; Manzannti, 2018; Song, Olshansky, Zhang & Xiao, 2017). Assessing the prospects of multi-dimensional development is not easy, let alone if there is a discrepancy between the three main pillars.

However, this evaluation is important to ensure that the planned development is implemented more responsibly and provides long-term benefits (Suprayoga, Witte & Spit, 2020). World leaders, both national and international, are aware of this fact (Ribeiro, Fonseca & Santos, 2020). Therefore various policies and initiatives are developed as the impact of this concept increases the productivity as well as stakeholder confidence (Graafland & Bovenberg, 2019; George & Reed, 2017). According to Aisyah

and Zainora (2017), environmental awareness is one of the basic components in strengthening sustainable development in every country. Awareness and understanding enable an individual to act to deepen their understanding of sustainability (Chen, Zhang, Huang & Zheng, 2018; Birdsall, 2018). Environmental awareness in oneself can lead to an increase in national capacity towards sustainable development (Korbee, van Halsema & Seijger, 2019; Jamilah, Hasrina, Hamidah & Juliana, 2016).

Emanuel and Adams (2018) conducted a study related to students' perceptions of sustainable campus development in Alabama and Hawaii colleges. They stressed that students' understanding and perception of sustainability can reflect the pattern of their involvement in practicing sustainable practices in the daily life of the students. Environmental awareness is essential to achieve the goal of environmental sustainability (Madsen, 1996). It is a term used to describe environmental knowledge based on facts, affective attitudes and behaviors towards environmental problems as well as values related to the environment (Landauer, Juhola & Klein, 2019; Arcury & Johnson, 1987).

Madsen (1996) asserts that all levels of society need to have the basics of environmental awareness and sustainability. Meanwhile, organizational leaders, including in the field of environmental studies should not only have knowledge and understanding of environmental problems, but also need to have awareness of ways to solve those problems (Madsen, 1996).

METHODOLOGY

This study focuses on the quantitative method approach. To achieve the objectives of this study, the instrument used is a questionnaire. Therefore, the population for this study consists of individuals involved in the construction sector. Population refers to the whole human being in a group, phenomenon or thing that interests the researcher. Samples are a subset of the population and are necessary to save time, expenses, energy and human resources, especially those involving large populations. Thus, the analysis unit or respondent is the individual involved in the field of interior decoration.

Other than that, this study focus on mean analysis to identify level of designer awareness of environmentally friendly concept.

RESULT AND DISCUSSION

Table 1 shows the mean values for eco-friendly design that is for the elements of knowledge, awareness and application. It was found that the mean value obtained was below 3.00. This proves that the level of knowledge, awareness and application of designers to eco-friendly is at a low



level. Because of this, stakeholders such as the government need to play a more proactive role so that sustainable development can be practiced more

effectively, especially in the application of eco-friendly concepts.

Table 1
Mean for Eco-friendly Design Elements

Item	Mean
Knowledge	1.30
Awareness	1.38
Application	1.52

Typically, the selection of a procurement system depends on the needs of the client, the type of project, the level of risk borne by the client, the resources and organizational structure involved in the construction project. It can be said that most construction projects in the government sector use conventional procurement methods by open tender, selective or direct negotiations. The main feature of conventional and phased conventional acquisition methods between the design and construction processes is seen as a major factor in the duration of this procurement process to be long and long. The communication gap between the consultants and the contractors involved also contributes to the occurrence of disputes in construction projects that use this conventional procurement system. Based on this situation, government green procurement (Government Green Procurement) has been introduced to overcome the problem in conventional procurement, especially in the government sector. The government's green procurement guidelines to be strengthened are the government's efforts in promoting the use of green or sustainable products and services in the country.

Apart from that, it is also one of the government's steps in achieving the main thrust in the Construction Industry Transformation Plan (CITP) 2016-2020 towards more sustainable development. Government green procurement for selected products and services was introduced in Malaysia in 2012 by the Ministry of Energy, Green Technology and Water which is in line with the establishment of the National Green Technology Policy which is the catalyst for the growth of green technology in the country. In 2018, the GGP 2.0 guidelines were published to act as the latest reference, covering 20 GGP criteria for green products and services, such as ICT equipment, air conditioning systems, and cleaning services. With the existence of this government green revenue, it is expected to signal to all industry players that the need to emphasize the concept of green is important to address the problem of environmental pollution that occurs as a result of development processes that do not care about previous environmental impact.

The implementation of procurement of products and services based on needs is also an effort

to prevent waste from continuing to occur. The government's efforts to strengthen this innovative procurement practice should be commended. It clearly proves that the government is serious about improving the quality of environmental conservation and community life in a comprehensive manner. This initiative not only focuses on the environment but also encourages the effective use and production of green products. In addition, the 11th Malaysia Plan (11MP) also states that the government's green procurement is able to encourage the development of the local green industry.

Therefore, the local industry has the opportunity to continue to compete in the production based on green products and services. Indirectly, it also helps local manufacturer's market innovative green products locally and abroad more widely. Various initiatives have been introduced towards realizing the implementation of the government's green procurement in supporting Malaysia's direction towards sustainable development. The Construction Industry Master Plan 2006-2015 has outlined the importance of conserving the environment in implementing a development. In addition, the National Green Technology Policy, MyHijau Procurement, and pH-JKR are among the government's efforts in ensuring that green procurement can be implemented effectively. Not only that, the Malaysian Construction Industry Development Board (CIDB) has also drawn up various plans and plans in support of the implementation of this government's green procurement.

Among them, in 2010, a Technical Committee for the Best Practices of Green Technology in the Construction Industry was established consisting of professionals in the construction industry. The establishment of this committee assists the Malaysian Construction Industry Board (CIDB) in providing manuals, guidelines and Construction Industry Standards related to green technology in the construction industry. To further complement this effort, programs related to green technology are increasingly being carried out by CIDB including the green labeling program for construction products known as CIDB Green Label. Its main objective is to encourage the production of green or eco-friendly



building products by building materials manufacturers in the country.

CONCLUSION

Despite the reality, the government's green procurement has not yet been formally applied in any construction project in Malaysia, but this initial effort needs to be upheld consistently and comprehensively. In the early stages it may be a little 'awkward' to practice, but over time it will become a 'common allergen.' Efforts to place Malaysia on par with developed countries such as the United States, United Kingdom, Australia, Japan and Singapore adopting this environmental, economic and social based construction, close cooperation from the government, industry players, and academics needs to be further strengthened. This is important to overcome obstacles in an effort to strengthen the government's green procurement practices in the country more effectively.

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